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Philips Medical Systems

Release Bulletin PCR Compano Reader

Software Version A10

4512 201 01664

Level 0 Documentation

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SERVICE MANUAL - UNIT

732

Release Bulletin PCR Compano Reader
Software Version A10

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4512 201 01664

In case there are any questions concerning this manual,
please, send this LOPAD via fax to +49/(0)40/5078 2481

File: RB Compano Reader_00751AA.doc

List of pages and drawings (LOPAD)

Manual Order No: 4512 988 00751
released 09/2005

1 ... 35	(05.0)

SW delivery information:

1 CD	114Y5436002 A10 (4512 116 04304) is part of the Reader's accessories from the following s/n onwards: # 56834465 This SW can also be downloaded from the Philips Intranet.

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1 Release Information

1.1 Supplied Software

PCR Compano Reader SW A10 4512 201 01664

Consisting of:

- 1 CD 'CR-IR 346RU Application Software'.....4512 116 04304 / 114Y5436002 A10
- this Release Bulletin.....4512 984 24594

Further documentation:

- Service Manual PCR Compano Reader
- System Manual Installation PCR Compano
- System Manual Installation PCR Compano S
- System Manual Installation PCR Eleva

The application software of the Compano Reader is delivered on a CD ROM and has to be loaded onto a separate PC. Depending on the application this PC is called either PCR Preview Unit or Console S or PCR Eleva Workspot.

The Reader itself contains permanent only a FTP program and a configuration file stored in the Flash PROMs of the CPU board. After power-on, the Reader establishes a network connection to the Host PC and loads from there its application software. Please refer also to chapter 2 "**Relation between Reader and PC**"

The **machine data** diskette contains a backup of the initial specific scanner data and is marked with the s/n of the Reader.

1.2 What's new?

Compared with A09:

Correction of the following errors:

1. The warning 12094 will not be logged anymore when the Reader's ftp server (connected PC) sends a termination command during shut down or termination of the application software.
2. In case the Reader's ftp server is very busy it happened that the green symbol for cassette insertion does not light up again after a processed cassette has been removed before.
3. An internal ID for the processed Imaging Plates has been created on base of minute cycle. If predominantly small Imaging Plates are being processed in intervals below one minute the same process ID has been assigned by the Reader. This can not be handled by the Reader's ftp server so the image has been rejected. Now the images will be numbered consecutively.

1.3 Compatibility

PCR Preview Unit	Rel. 1.1 →
Console Compano S	Rel. 1.1 →
PCR Eleva Workspot	Rel. 1.0 →

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2 Relation between Reader and PC

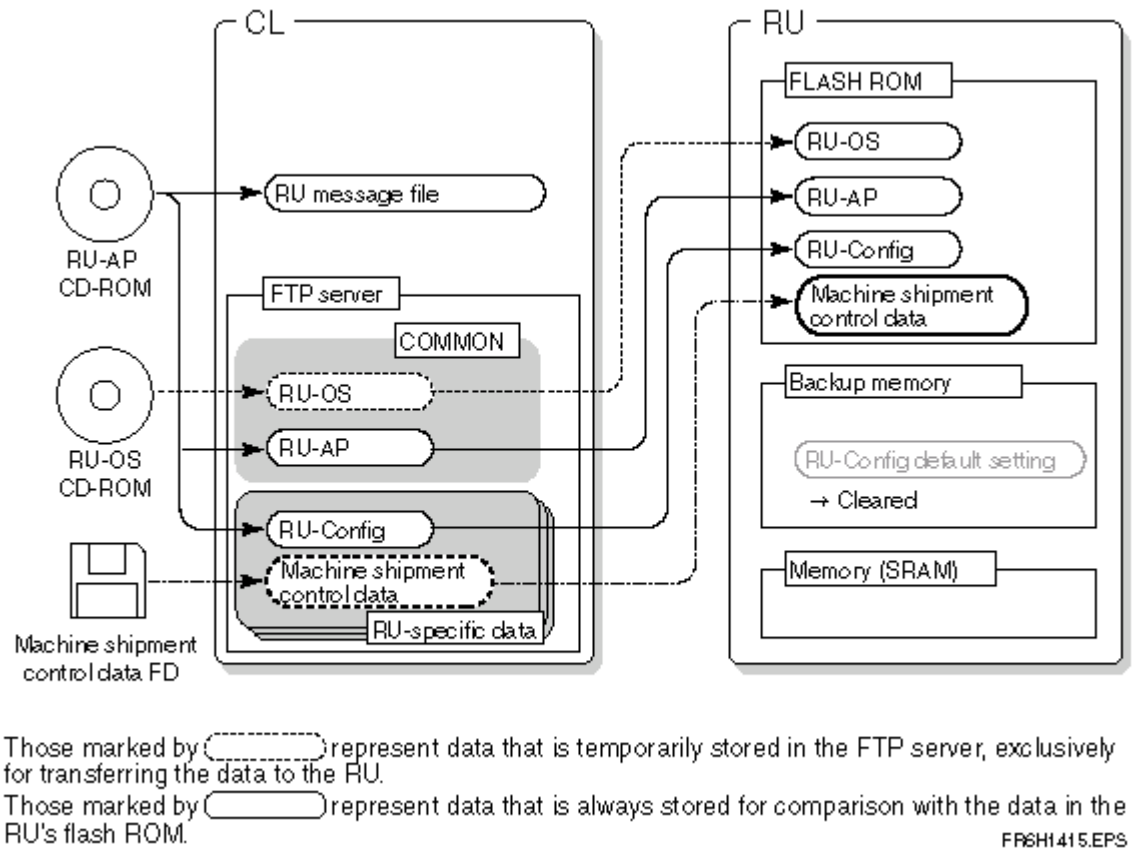
Explained below is the PC/ Reader data exchange operation to be performed when these two system components are connected with each other.

NOTE

The data referred to herein is for both the application used to operate the Reader (Reader-AP hereinafter) and the Reader's configuration file (Reader-Config hereinafter).

The external interface that updates Reader's internal data, such as the Reader-AP or Reader-Config, is not provided in the Reader unit (=RU). Thus, a PC (OS: Windows 2000/ XP) is used for this purpose.
Basically, the PC (=CL = Console) is used to control the Reader.
Because the FTP server function is used for updating Reader's internal data, the FTP server needs to be configured in the PC.
Furthermore, to enable the Reader to be operated, the Reader-AP and Reader-Config must be stored in the Reader's FLASH ROM and, at the same time, the Reader-AP and Reader-Config of the same contents as that in the FLASH ROM must be stored in the FTP server as well.

Data Flow during installation:



RU-AP (solid-line arrow):
When RU-AP is installed, the RU-AP, RU-Config, and RU message file are copied to the CL.
The RU-AP and RU-Config are copied to the flash ROM via the network.

RU-OS (dotted-line arrow)/machine shipment control data (alternate-long-and short-dash-line arrow):
The RU-OS and machine shipment control data are copied to the RU's flash ROM via the FTP server of the CL.

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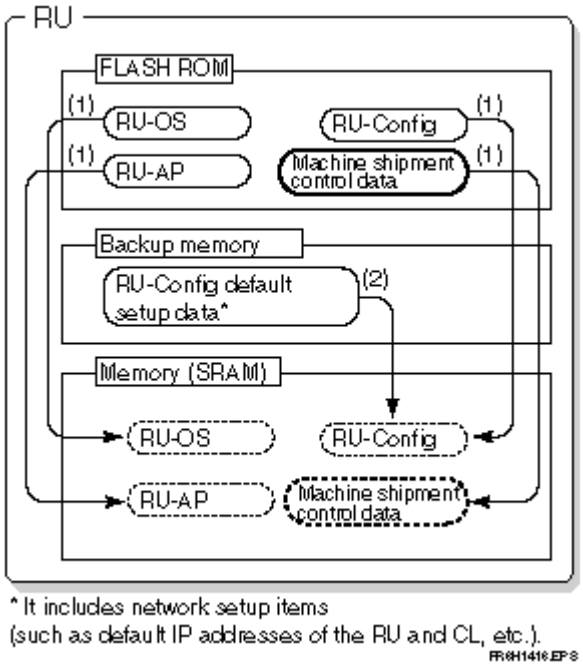
Data flow during boot up:



The data in the Flash ROM will be copied into the memory (1).
If the backup memory has been erased and contains the default data now, the configuration data of the memory will be overwritten by the default data (2).

Data flow in the normal process:

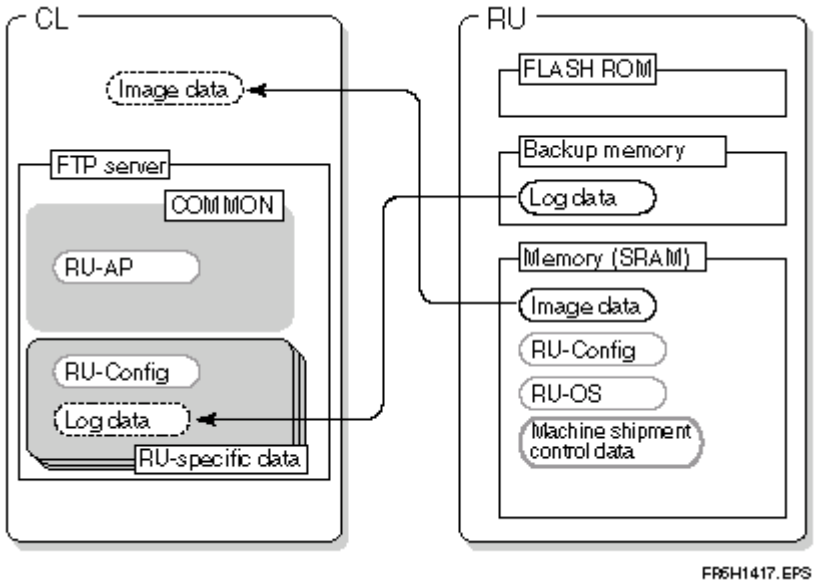


Image data:
The image data scanned from the IP is temporarily stored in the SRAM, and then transferred to the CL via the network.

Log data:
The log data is written, upon shutdown processing or upon occurrence of a FATAL error, from the RU BACKUP MEMORY (SRAM) to the FTP server.
The RU BACKUP MEMORY (SRAM) retains the log data that is logged while the RU is powered ON.
The FTP server retains a certain amount of the log data, which is overwritten by newer data on a first-in-first-out basis when a predetermined level is exceeded.

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3 PCR Eleva and Compano Reader

PCR Eleva systems have running the service program Field Service Framework (FSF) on its so called workspot. All the service relevant work has to be done via this tool protected by Philips.
The service instructions of this manual are general ones and do not reflect the specials of PCR Eleva.
So negligible deviation in the use of the service functionality may occur. Further information may be included in the Release Bulletin of the PCR Eleva Workspot.

The following service menus of FSF activate the so called PC- MUTL program:

SW installation: General Functions/ Install software/ PCR Reader software

General: General Functions/ Utilities/ Start Maintenance Utility for PCR Reader (PC-MUTL)

Configuration: Configuration/ Local workspot PC/ PCR Reader configuration via PC-MUTL

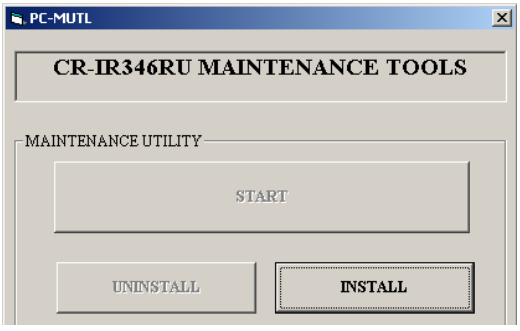
Diagnostics: Diagnostics/ Log Viewer/ Maintenance Utility for PCR Reader (PC-MUTL)

4 Initial Software Installation and Setup

Before you begin:
The default factory set IP address for the Reader is 172.16.1.10. This IP address is initially used for setting up the Reader from the PC via the network. If the Reader is hooked up to a hospital network, it can be possible that the network administrator doesn't allow you to connect the Reader using the default IP address. In that case you should either use a separate network hub or set up the Reader via the serial port (see chapter **MUTL via the Serial Port**).

Make sure that both PC and Reader are connected to the network and are both switched on.
The Reader software has to be installed in the Administrator mode if applicable at the PC.

1. Insert the CD into the CD-ROM drive of the PC.
   Within a few seconds the **CR-IR 346RU Maintenance Tool** is started (PCR Eleva: via FSF).



2. Click [**Install**]:

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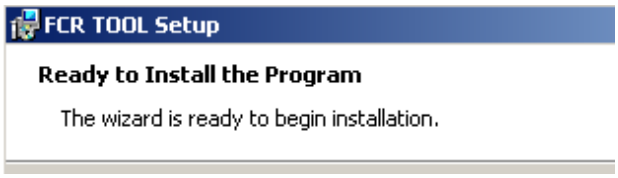
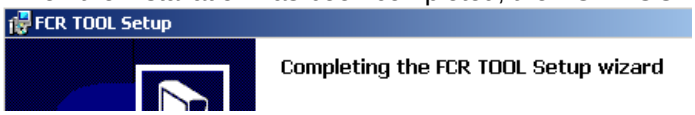
3. Click [**Next**] .
   The **FCR TOOL Setup/Ready to Install...** window opens.



4. Click [**Install**]**:**
   When the installation has been completed, the **FCR TOOL Setup/Completing the...** window opens.



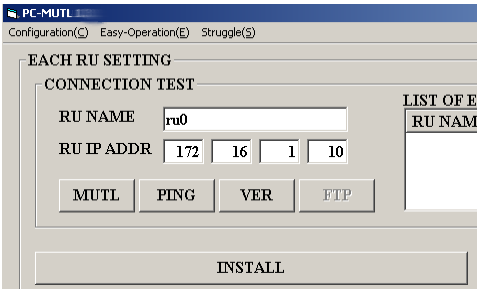
5. Click [**Finish**].

   The system returns to the **CR-IR 346RU MAINTENANCE TOOLS** window.

6. Click [**Start**] to start the **PC MAINTENANCE UTILITY** (PC MUTL).

7. The default address for the Reader is already entered. This address is used to initially communicate with the Reader even if the address will be changed later on.

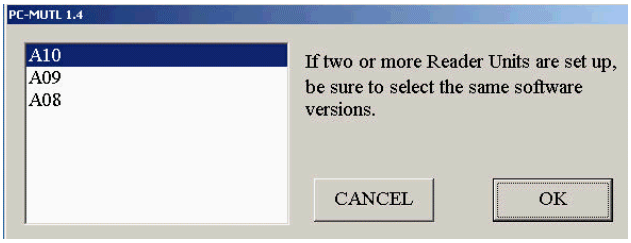
   To check the communication click [**PING**].



8. Click [**Install**].

9. When asked for, make sure the CD is inserted and click [**OK**].

10. Make sure the most recent software has been selected and click [**OK**]:



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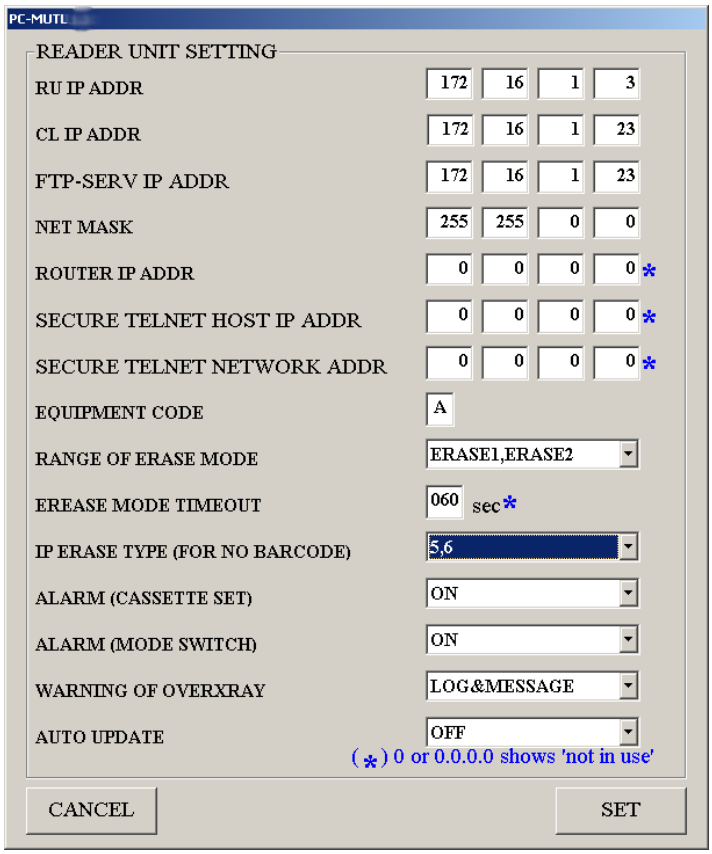
11. Now enter the configuration data:

RU IP ADDR	IP address of the Reader
CL IP ADDR	IP address of the PC
FTP-SERV IP ADDR	IP address of the PC
NET MASK	Net mask, to be set as narrow as possible
ROUTER IP ADDR	IP address of the default gateway or router
SECURE TELNET HOST IP ADDRESS	Default: 0.0.0.0
SECURE TELNET NETWORK ADDRESS	Default: 0.0.0.0
EQUIPMENT CODE	Reader unique ID, must be different in a cluster
RANGE OF ERASE MODE	Specifies the erasure mode range. ERASE 1: Primary erasure can be selected. ERASE 1, ERASE 2: Both primary and secondary erasures can be selected.
ERASE MODE TIMEOUT	Default : 60 sec
IP ERASE TYPE	Setup needed if no barcode reader is installed. 5, 6 :Types V and VI mixed. 6 : Type VI
ALARM (CASSETTE SET)	Sets alarm ON/OFF when cassette is inserted. ON : Alarm sounds. OFF : Alarm does not sound
ALARM (MODE SWITCH)	Sets alarm ON/OFF when erasure processing is selected. ON : Alarm sounds. OFF : Alarm does not sound.
WARNING OF OVERXRAY	Selects X-ray over-exposure IP warning method. LOG & MESSAGE: Warning by log and message. LOG: Warning by log. NONE: No warning issued .
AUTO UPDATE	Select OFF


PC-MUTL
READER UNIT SETTING
RU IP ADDR 172 16 1 3
CL IP ADDR 172 16 1 23
FTP-SERV IP ADDR 172 16 1 23
NET MASK 255 255 0 0
ROUTER IP ADDR 0 0 0 0 *
SECURE TELNET HOST IP ADDR 0 0 0 0 *
SECURE TELNET NETWORK ADDR 0 0 0 0 *
EQUIPMENT CODE A
RANGE OF ERASE MODE ERASE1,ERASE2
EREASE MODE TIMEOUT 060 sec *
IP ERASE TYPE (FOR NO BARCODE) 5,6
ALARM (CASSETTE SET) ON
ALARM (MODE SWITCH) ON
WARNING OF OVERXRAY LOG&MESSAGE
AUTO UPDATE OFF
(*) 0 or 0.0.0.0 shows 'not in use'
CANCEL
SET

Click [**SET**] to store the configuration data onto hard disk and in the Reader.

During transfer of the configuration data the Reader is giving a few beeps and the LEDs at the front panel are flashing. Never turn off the power of the Reader in this situation.

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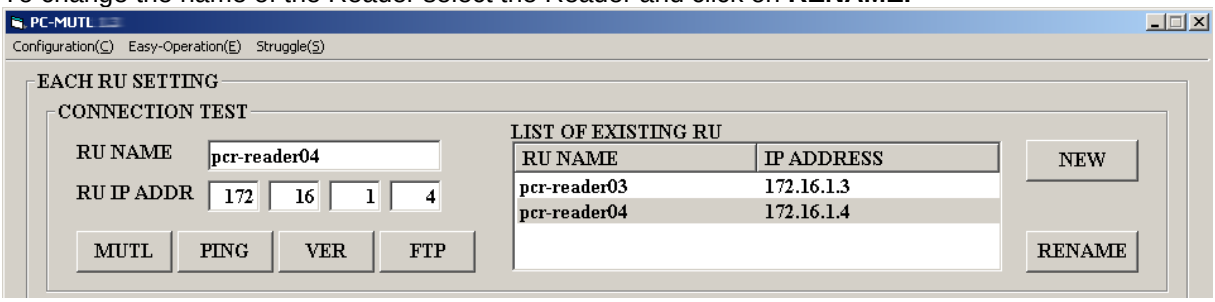
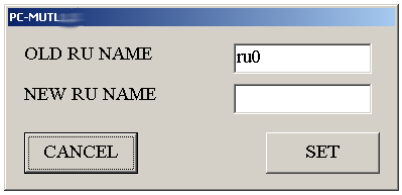
Wait until transfer has been finished and the window has been closed.

12. When the **Completed** message is displayed, click [**OK**].

13. To change the name of the Reader select the Reader and click on **RENAME.**



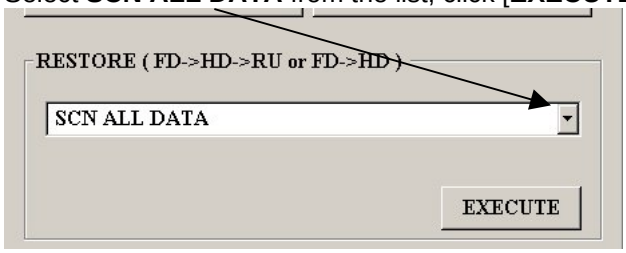
14. Enter the new name of the Reader and click on **SET**.



During data transfer the Reader is giving a few beeps and the LEDs at the front panel are flashing.
Never turn off the power of the Reader in this situation.
Wait until transfer has been finished and the window has been closed.

15. Insert the floppy disk **Machine Shipment Data** that came with the Reader into the floppy drive.

16. Select **SCN ALL DATA** from the list, click [**EXECUTE**] , then [**OK**].



During transfer of the scanner data the Reader is giving a few beeps and the LEDs at the front panel are flashing. Never turn off the power of the Reader in this situation.
Wait until transfer has been finished and the window has been closed.

17. When the **Completed** message is displayed, click [**OK**].

18. Click [**X**] to close the **Maintenance utility** window.

19. Click [**EXIT**] to close the **Maintenance tool** window.

20. Remove CD and floppy from the drive and go back to the Release Bulletin of the PC.

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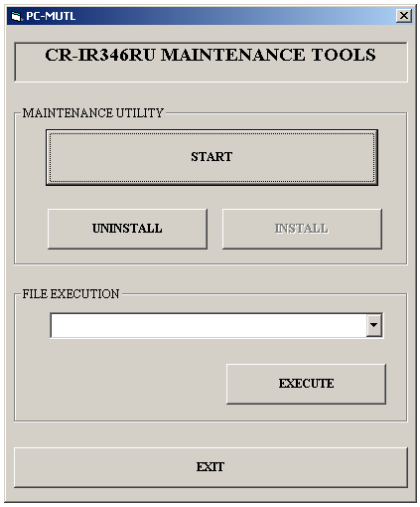
5 Upgrading to A10

5.1 Remove the old PC Maintenance Utility (A08 and former versions)

Note:
Needed for A08 and former versions of software only!
If A09 is installed, please proceed with chapter 5.5.

1. Leave the application software and make sure to be logged in as administrator if applicable.

2. Insert the CD into the CD drive.
   Within a few seconds the **CR-IR346RU Maintenance Tool** is started (PCR Eleva: via FSF).

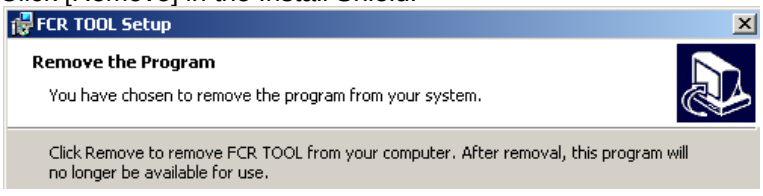


3. Click [**Uninstall**].

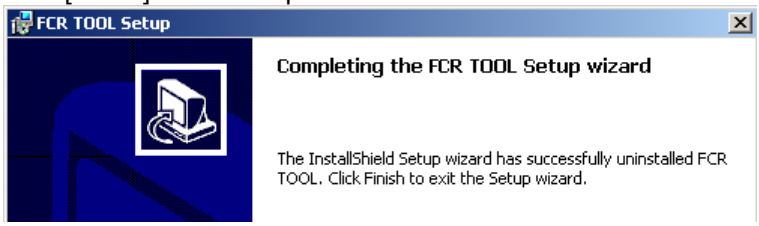
4. Click [**Next**] in the setup wizard.

FCR TOOL Setup
Welcome to the FCR TOOL Setup wizard
The InstallShield(R) Setup wizard will allow you to remove FCR TOOL. To continue, click Next.

5. Click [Remove] in the Install Shield.


FCR TOOL Setup
Remove the Program
You have chosen to remove the program from your system.
Click Remove to remove FCR TOOL from your computer. After removal, this program will no longer be available for use.

6. Click [Finish] in the Setup wizard.


FCR TOOL Setup
Completing the FCR TOOL Setup wizard
The InstallShield Setup wizard has successfully uninstalled FCR TOOL. Click Finish to exit the Setup wizard.

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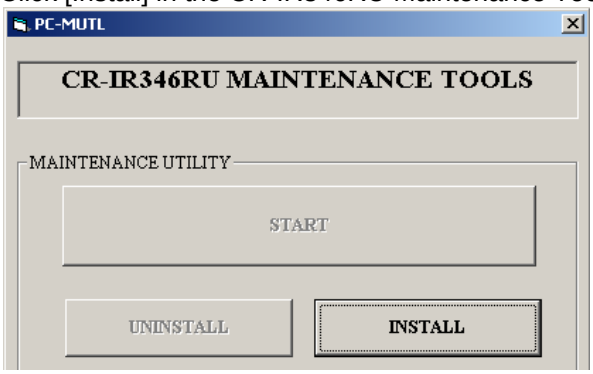
5.2 Install the new PC Maintenance Utility 1.4 (A08 and former versions)

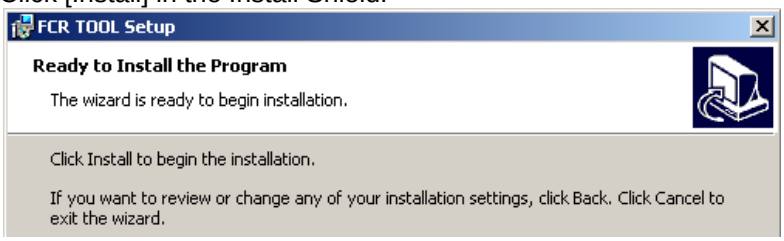
1. Click [Install] in the CR-IR346RU Maintenance Tool.



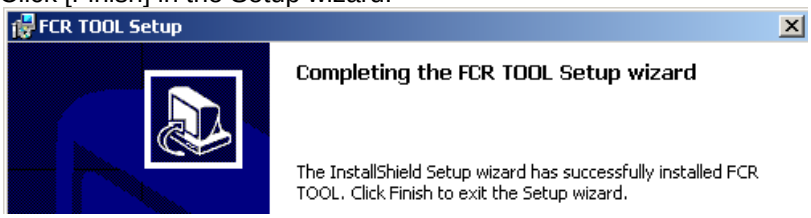
2. Click [Next] in the Setup wizard.

FCR TOOL Setup
Welcome to the FCR TOOL Setup wizard
The InstallShield(R) Setup wizard will install FCR TOOL on your computer. To continue, click Next.

3. Click [Install] in the Install Shield.


FCR TOOL Setup
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

4. Click [Finish] in the Setup wizard.


FCR TOOL Setup
Completing the FCR TOOL Setup wizard
The InstallShield Setup wizard has successfully installed FCR TOOL. Click Finish to exit the Setup wizard.

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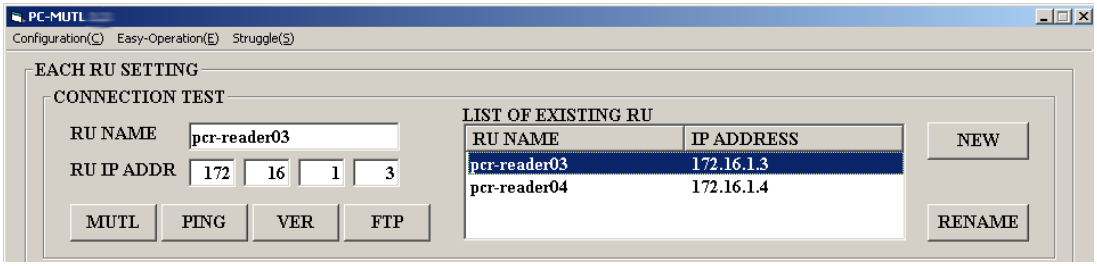
5.3 Check the FTP Server (A08 and former versions)

1. Select the Reader unit.



2. Click [FTP] button. Check the contents of both command prompt windows.
The following are examples only!

FTP at the PC side: **Example only!**

```
.\COMMON:
07-24-01  08:00AM            131840 346FT.O
07-24-01  08:00AM             65536 BOOTSECT.O
05-22-02  02:00AM           1013426 CR-IR346.O
09-27-00  05:00PM             65535 IMAGEAPL.O
09-27-00  05:00PM             65535 IMAGEIPL.O
07-24-01  08:00AM            243743 VXWORKS2.ST

.\pcr-reader03:                                   Check name of the reader unit.
09-13-02  08:51AM    <DIR>          CONFIG
09-12-02  02:50PM    <DIR>          LOG
09-12-02  01:40PM    <DIR>          MACHINE

.\pcr-reader03\CONFIG:                            Check name of the reader unit.
09-13-02  08:51AM              1676 IRSET.CFG
02-01-02  05:00PM              1649 IRSET.ORG
09-12-02  02:31PM               959 IRSTATUS.CFG
09-27-00  05:00PM               959 IRSTATUS.ORG
09-03-02  01:46PM               106 NETMASKS
09-27-00  05:00PM               258 ROUTE

.\pcr-reader03\LOG:                               Check name of the reader unit.
09-12-02  02:56PM               916 HISTORY.LOG   History file must be available.
09-12-02  02:50PM               176 IOT.031
09-12-02  01:09PM                88 RUAPPL.chk
09-12-02  01:09PM              1521 RUAPPL.dat
09-12-02  02:31PM               100 RUCONFIG.chk
09-12-02  02:31PM              1426 RUCONFIG.dat
09-13-02  08:51AM                25 RUHost.dat
09-12-02  01:47PM              1602 Version.dat
```

FTP server check from the Reader's side: **Example only!**

```
0.QUIT
 1.~cr-ir346/
 2.~cr-ir346/SYSTEM/
 3.~cr-ir346/SYSTEM/COMMON/
 4.~cr-ir346/SYSTEM/[RuName]/CONFIG /
 5.~cr-ir346/SYSTEM/[RuName]/MACHINE/
TST>NTW>DSPFTP>4
SYSTEM/pcr-reader03/CONFIG/
09-13-02  08:51AM              1676 IRSET.CFG
02-01-02  05:00PM              1649 IRSET.ORG
09-12-02  02:31PM               959 IRSTATUS.CFG
09-27-00  05:00PM               959 IRSTATUS.ORG
09-03-02  01:46PM               106 NETMASKS
09-27-00  05:00PM               258 ROUTE

0.END (DEFAULT=0) : 0
RESULT : OK                                       OK must be displayed.
```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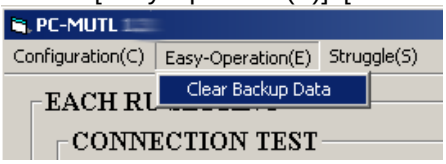
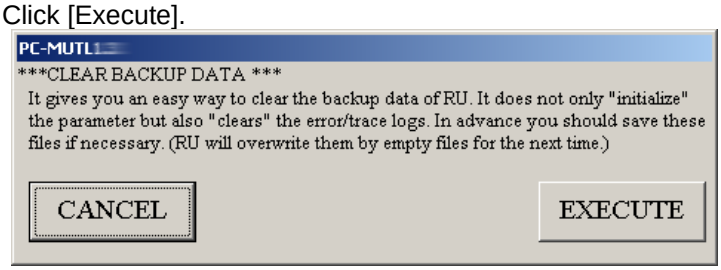
If there is anything abnormal please refer to section **'Trouble with Configuration'**.

5.4 Clear Backup Memory Data (A08 and former versions)

1. Select the Reader unit in the PC Maintenance Utility.
2. Click on [Easy Operation(E)]/ [Clear Backup Data].



3. Click [Execute].


PC-MUTL
***CLEAR BACKUP DATA ***
It gives you an easy way to clear the backup data of RU. It does not only "initialize" the parameter but also "clears" the error/trace logs. In advance you should save these files if necessary. (RU will overwrite them by empty files for the next time.)
CANCEL
EXECUTE

In a DOS windows can be seen that the PC establishes the network connection to the Reader and starts the MUTL in the Reader.

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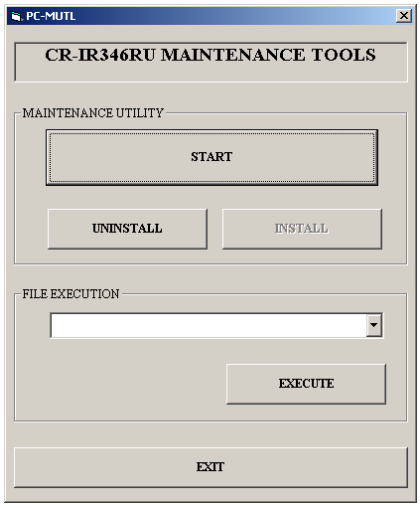
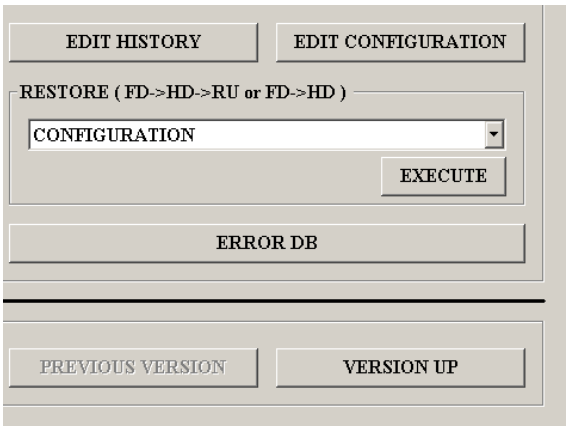
5.5 Upgrade the Reader Unit Software

1. Leave the application software and make sure to be logged in as administrator if applicable.

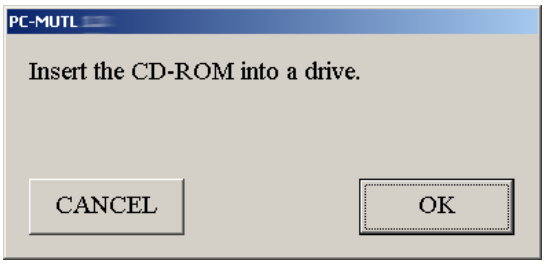
2. Insert the CD into the CD drive.
   Within a few seconds the **CR-IR346RU Maintenance Tool** is started (PCR Eleva: via FSF).



3. Click on [Version up].



4. Click on [OK].



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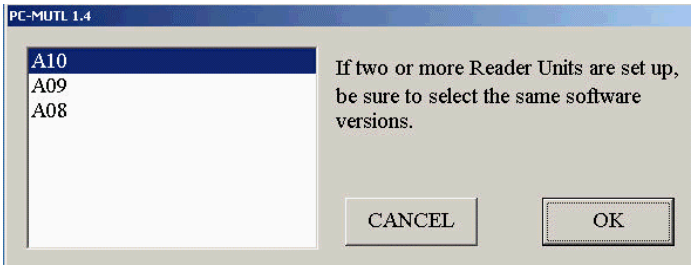
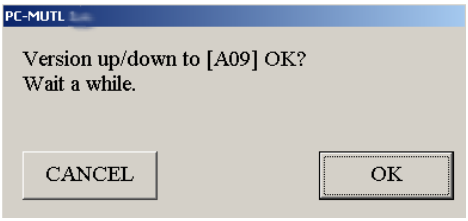
5. Select the latest version and click [OK].



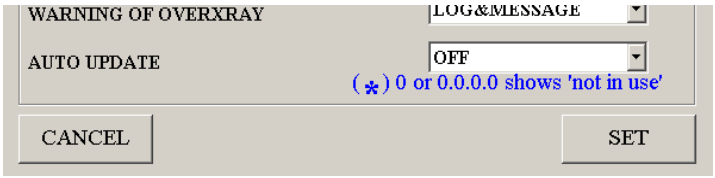
6. Click [OK] in the confirmation window (example with A09).



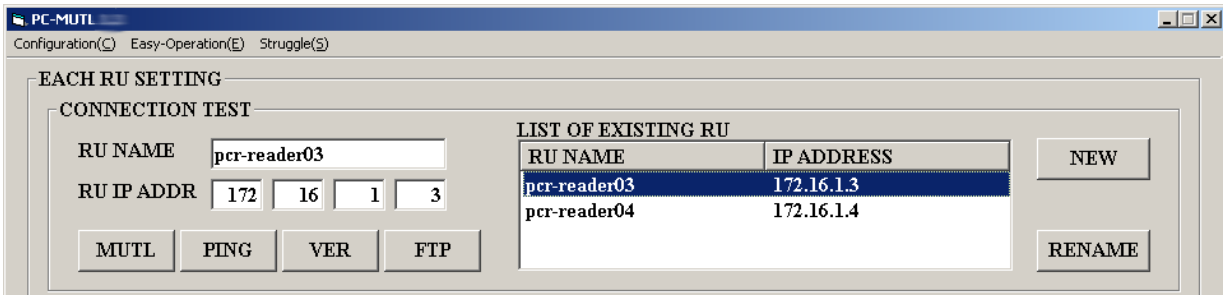
During transfer of the data the Reader is giving beeps and the LEDs at the front panel are flashing.
Never turn off the power of the Reader in this situation.
Wait until the transfer (about 3 min.) has been finished and the window has been closed.
All connected Reader units will be updated automatically.

7. Click [OK] in the appearing complete window.

8. Set AUTOUPDATE to OFF in ***Edit Configuration*** and click [Set].



9. Select the Reader unit and click [Ver] button.



10. Check the software upgrade in the opened command prompt windows.

```
RU[pcr-reader03] login: cr-ir346
Password:
-> mutl

MAINTENANCE UTILITY FOR CR-IR346.
Escape INPUT/AUTO mode: [CTRL+C] [ENTER]
 0.QUIT
 1.LOG
 2.VERSION
 3.TEST
 4.ELECTORICAL UTILITY
 5.SCANNER UTILITY
```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```
 6.MECHANICAL UTILITY
 7.SOFTWARE UTILITY
 8.BACKUP MEMORY INITIALIZE
 9.HV OFF
>2
 0.QUIT
 1.DISPLAY VERSION
 2.DETAIL
VER>1
CR-IR346RU Application Software  : 114Y5436002A10   Check for A10!
Software Resource Version
 MAIN CPU IPL       :    Z45N5436001A02             Check for A02!

 MAIN CPU APPL      :    Z45N5436002A10             Check for A10!
 SUB  CPU IPL       :    Z45N5436103A01
 SUB  CPU APPL      :    Z45N5436103B02
 SCN  CPU APPL      :    Z45N5436202B06

Hardware Type(VER_REG)
 CPU12A             :    00   [02,00]
 SNS12A             :    00   [00]
 DRV12A             :    00
 SCN12A             :    00   [14]

 0.QUIT
 1.DISPLAY VERSION
 2.DETAIL
VER>
```

If the MAIN CPU IPL has not being upgraded to A02 proceed with next chapter 'Manual Main IPL Software Upgrade'.

11. Start up the Reader and the PC in the normal application mode. Check that no errors and no abnormal images occur.

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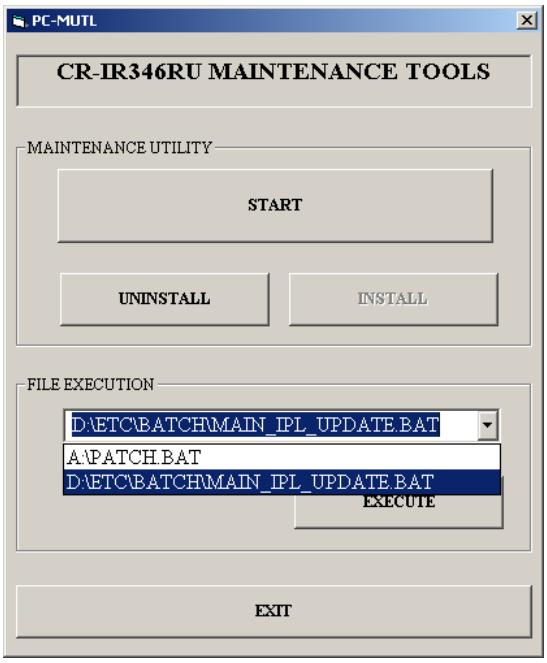
5.6 Manual Main IPL Software Upgrade

This is the manual way for upgrading the so called Main IPL software of the Reader if the previous automatic upgrading has failed.

1. Insert the CD-ROM into the drive.
   The CR-IR346RU Maintenance Tool appears (PCR Eleva: via FSF).

2. Select the batch file according to the figure below.



3. Add the IP address of the Reader to the batch file, e.g. ..._UPDATE.BAT 172.16.1.3

4. Click [Execute].

5. Press [Enter] when the following messages appear.

```
========================== MAIN_IPL_UPDATE.BAT ==========================
This is a batch program to upgrade the MAIN_IPL software of RU.
At first, automatically check the version of the RU's application.
---- Are you ready?  (Escape character is [CTRL]+C) ----
Press any key to continue . . .                                  Press <Enter>
```

```
CR-IR346RU Application Software  : 114Y5436002A08                  (Example only!)

Confirm the version A05 or later (see an underline-part above).
Never turn the RU OFF while updating, or you will lose the CPU12A board.
---- Are you ready?  (Escape character is [CTRL]+C) ----
Press any key to continue . . .                                  Press <Enter>
```

During the following transfer of the data the Reader is giving beeps and the LEDs at the front panel are flashing.
Never turn off the power of the Reader in this situation.
Wait until the data transfer has been finished and the result OK is displayed.
The transfer happens twice!

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```
RU[pcr-reader03] login: cr-ir346
Password:
-> mutl

MAINTENANCE UTILITY FOR CR-IR346.
Escape INPUT/AUTO mode: [CTRL+C] [ENTER]
 0.QUIT
 1.LOG
 2.VERSION
 3.TEST
 4.ELECTORICAL UTILITY
 5.SCANNER UTILITY
 6.MECHANICAL UTILITY
 7.SOFTWARE UTILITY
 8.BACKUP MEMORY INITIALIZE
 9.HV OFF
>2

 0.QUIT
 1.DISPLAY VERSION
 2.DETAIL
VER>2

 0.QUIT
 1.LOAD SOFTWARE FROM FTP-SERV
 2.LOAD CONFIGURATION FROM FTP-SERV
 3.COMPARE SOFTWARE WITH FTP-SERV
VER>DETAIL>1

 0.QUIT
 1.MAIN CPU IPL
 2.MAIN CPU APPL
 3.MAIN CPU FT
 4.SUB CPU IPL
 5.SUB CPU APPL
VER>DTL>LDSFT>3

ARE YOU SURE ?
 1.YES 2.NO(DEFAULT=2) : 1

WAIT FOR A WHILE. IT TAKES FROM 3 TO 180 SECONDS.
NEVER TURN OFF THE RU UNTIL "RESULT" IS INDICATED !!!

RESULT : OK                                                    Wait for OK!

 0.QUIT
 1.MAIN CPU IPL
 2.MAIN CPU APPL
 3.MAIN CPU FT
 4.SUB CPU IPL
 5.SUB CPU APPL
VER>DTL>LDSFT>1

ARE YOU SURE ?
 1.YES 2.NO(DEFAULT=2) : 1

WAIT FOR A WHILE. IT TAKES FROM 3 TO 180 SECONDS.
NEVER TURN OFF THE RU UNTIL "RESULT" IS INDICATED !!!

RESULT : OK                                                    Wait for OK!

 0.QUIT
 1.MAIN CPU IPL
 2.MAIN CPU APPL
 3.MAIN CPU FT
 4.SUB CPU IPL
 5.SUB CPU APPL
VER>DTL>LDSFT>0
Press any key to continue . . .                                Press <Enter>
```

6. Click [Exit].

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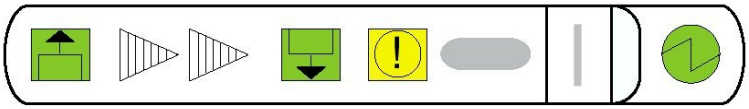
6 Auto- Updating Software

Note: Configure the Reader to AUTO UPDATE = OFF for the normal application.

Normally the Reader has been configured to AUTO UPDATE = OFF to prevent an automatic upload of new software from the PC. This is very important especially during the automatic conversion of winter/summer time. If AUTO UPDATE = ON the Reader detects after its boot process an updated configuration file or application software on the PC, the Reader shows the following behavior, explained for a Compano S system.

1. All the LEDs on the RU panel come on and short beeps are generated, indicating that the Reader software and configuration data are being updated.



Caution:
While the RU panel LEDs are illuminated, never turn OFF the Reader because its CPU board may get damaged.

If you have reloaded the software and you are using the same configuration data for the Reader, the LED may not come on.

2. When the button

appears (language dependent) click this button.

The configuration data in the Reader FLASH ROM is updated.

3. After a while the Reader initialization process begins. The Console application window shows a message to indicate that the Reader is being initialized. Note that this message does not appear if the Reader has been started up before the Console application.

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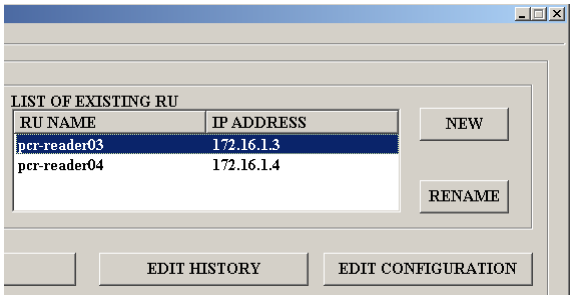
7 Configuration

The meaning of the configuration parameters are described in the service manual of the Reader.
See section Maintenance Utility.

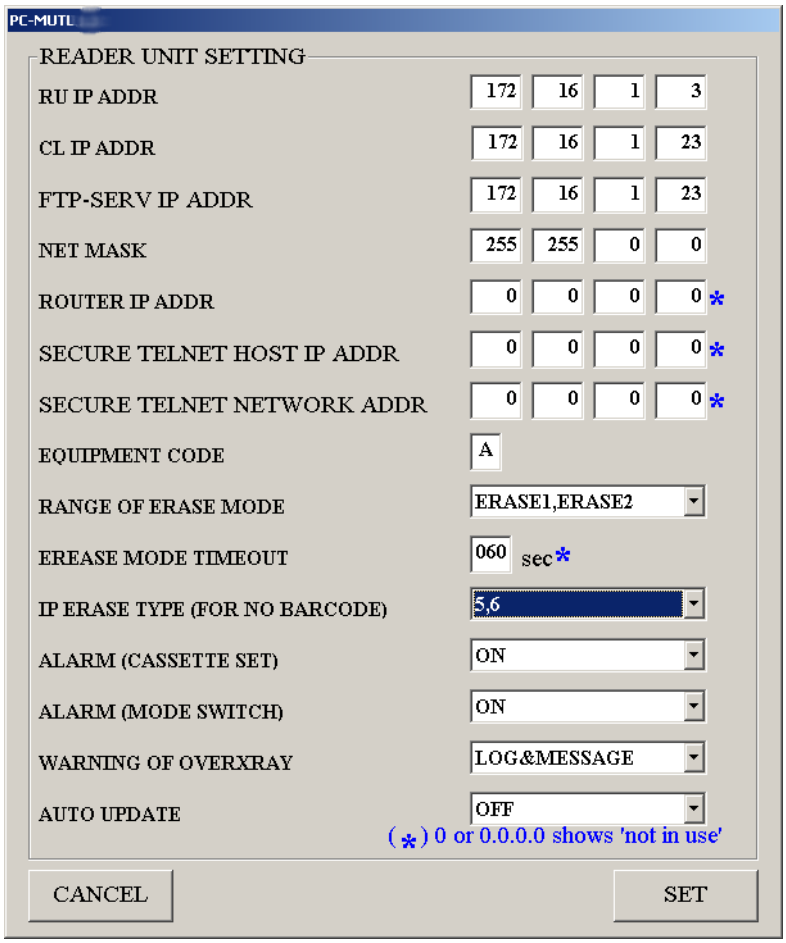
7.1 Changing the configuration

1. Startup the Maintenance Utility as described in chapter **Starting the Maintenance Utility**.

2. From the **LIST OF EXISTING RU**, click the Reader which configuration file is to be set.



3. Click [**EDIT CONFIGURATION**]. The **READER UNIT SETTING** window opens:


PC-MUTL
READER UNIT SETTING
RU IP ADDR 172 16 1 3
CL IP ADDR 172 16 1 23
FTP-SERV IP ADDR 172 16 1 23
NET MASK 255 255 0 0
ROUTER IP ADDR 0 0 0 0 *
SECURE TELNET HOST IP ADDR 0 0 0 0 *
SECURE TELNET NETWORK ADDR 0 0 0 0 *
EQUIPMENT CODE A
RANGE OF ERASE MODE ERASE1,ERASE2
EREASE MODE TIMEOUT 060 sec *
IP ERASE TYPE (FOR NO BARCODE) 5,6
ALARM (CASSETTE SET) ON
ALARM (MODE SWITCH) ON
WARNING OF OVERXRAY LOG&MESSAGE
AUTO UPDATE OFF
(*) 0 or 0.0.0.0 shows 'not in use'
CANCEL
SET

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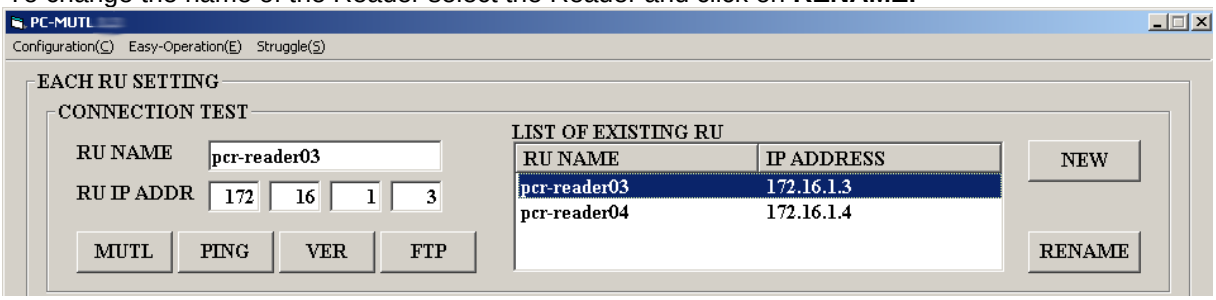
RU IP ADDR	IP address of the Reader
CL IP ADDR	IP address of the PC
FTP-SERV IP ADDR	IP address of the PC
NET MASK	Net mask, to be set as narrow as possible
ROUTER IP ADDR	IP address of the default gateway or router
SECURE TELNET HOST IP ADDRESS	Default: 0.0.0.0
SECURE TELNET NETWORK ADDRESS	Default: 0.0.0.0
EQUIPMENT CODE	Reader unique ID, must be different in a cluster
RANGE OF ERASE MODE	Specifies the erasure mode range. ERASE 1: Primary erasure can be selected. ERASE 1, ERASE 2: Both primary and secondary erasures can be selected.
ERASE MODE TIMEOUT	Default : 60 sec
IP ERASE TYPE	Setup needed if no barcode reader is installed. 5, 6 :Types V and VI mixed. 6 : Type VI
ALARM (CASSETTE SET)	Sets alarm ON/OFF when cassette is inserted. ON : Alarm sounds. OFF : Alarm does not sound
ALARM (MODE SWITCH)	Sets alarm ON/OFF when erasure processing is selected. ON : Alarm sounds. OFF : Alarm does not sound.
WARNING OF OVERXRAY	Selects X-ray over-exposure IP warning method. LOG & MESSAGE: Warning by log and message. LOG: Warning by log. NONE: No warning issued .
AUTO UPDATE	Select OFF

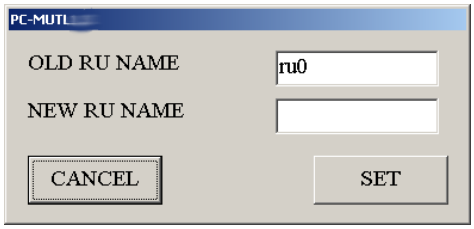
4. Change the data as needed.

5. When done click [**SET**]. The configuration is saved to hard disk and the system returns to the main menu.

6. To change the name of the Reader select the Reader and click on **RENAME.**



7. Enter the new name of the Reader and click on **SET**.



During data transfer the Reader is giving a few beeps and the LEDs at the front panel are flashing.
Never turn off the power of the Reader in this situation.
Wait until transfer has been finished and the window has been closed.

8. Click [**X**]. The system returns to the desktop screen.

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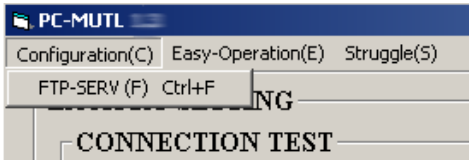
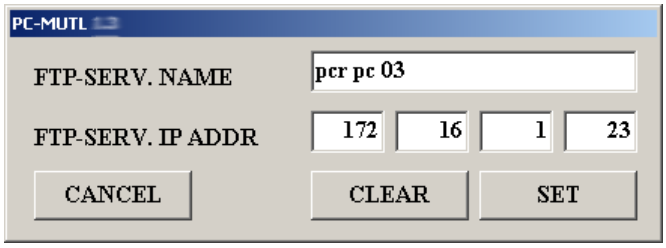
9. Adapt the name and IP address of the PC (FTP Server) by using the menu **Configuration/ FTP-SERV (F)**.





10. Adapt also the host name and IP address of the PC in Windows.
Refer to the Release Bulletin of the Console (Preview Unit, Compano S , Eleva Workspot).

11. Now restart the Reader and start up the application.

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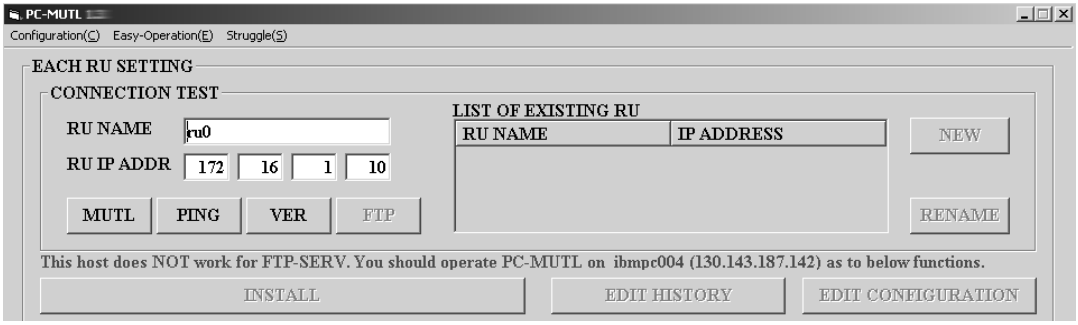
7.2 Trouble with Configuration

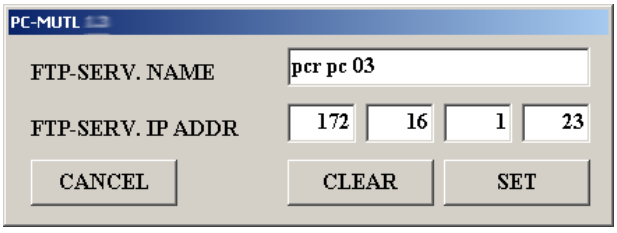
7.2.1 This Host does not work for FTP_SERV

Example:



Cause: IP name and IP address of the PC does not match the configuration of the Reader.

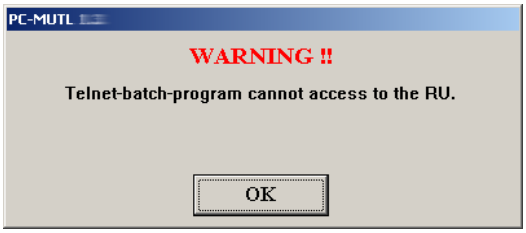
Solution: Configure the FTP Server of the PC.
For doing this click Configuration(C)/ FTP-SERV (F), enter the matching data and click [Set].



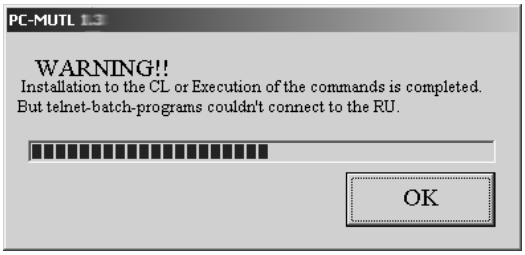
Be sure that the entered data are identical with the one set in Windows.

7.2.2 Telnet- Batch- Program cannot access the RU

Example 1:



Example 2:


PC-MUTL
WARNING!!
Installation to the CL or Execution of the commands is completed.
But telnet-batch-programs couldn't connect to the RU.
OK

Cause: The IP addresses and names stored in the Flash ROM of the Reader do not match the Reader configuration at the PC.

Solution: Adapt the IP names and IP addresses either inside the Reader (via serial interface) or in the Reader's configuration at the PC side.

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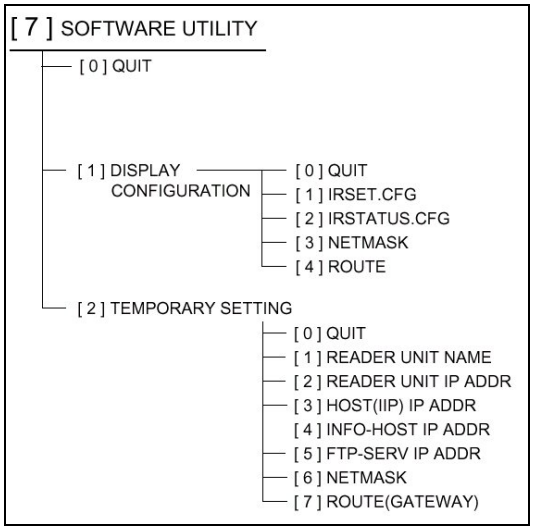
7.2.3 Temporary Settings inside the Reader

However, if there is a configuration mismatch, the Flash ROM inside the Reader can be configured directly.

1. Start **MUTL** either via the network or the serial interface.
2. Enter 7 to select **SOFTWARE UTILITY**.
3. Enter 2 to select **TEMPORARY SETTING.**


[7] SOFTWARE UTILITY
[0] QUIT
[1] DISPLAY CONFIGURATION
[0] QUIT
[1] IRSET.CFG
[2] IRSTATUS.CFG
[3] NETMASK
[4] ROUTE
[2] TEMPORARY SETTING
[0] QUIT
[1] READER UNIT NAME
[2] READER UNIT IP ADDR
[3] HOST(IIP) IP ADDR
[4] INFO-HOST IP ADDR
[5] FTP-SERV IP ADDR
[6] NETMASK
[7] ROUTE(GATEWAY)

Now enter in sequence

[1] READER UNIT NAME	IP name of the Reader
[2] READER UNIT IP ADDR	IP address of the Reader
[3] HOST(IIP) IP ADDR	IP address of the PC
[4] INFO-HOST IP ADDR	IP address of the PC
[5] FTP-SERV IP ADDR	IP address of the PC
[6] NETMASK	Net mask
[7] ROUTE(GATEWAY)	IP address of the Router / Gateway

IP names and IP addresses must match the settings made at the PC.

4. When done, press <0> <Enter> and again <0> <Enter>.
5. Restart the Reader.

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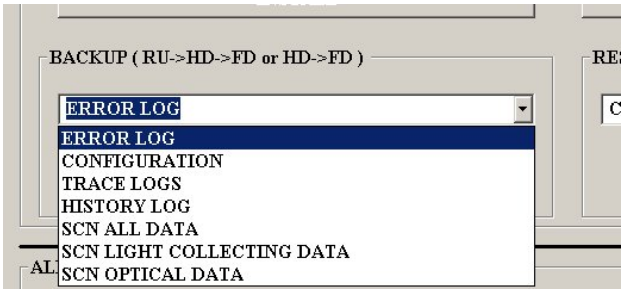
7.3 Backup and Restore

Startup the PC Maintenance Utility.
Have on hand a formatted diskette or the diskette containing the backup data.

7.3.1 Backup

1. To back up Reader-specific data select the data you want to save from the list:

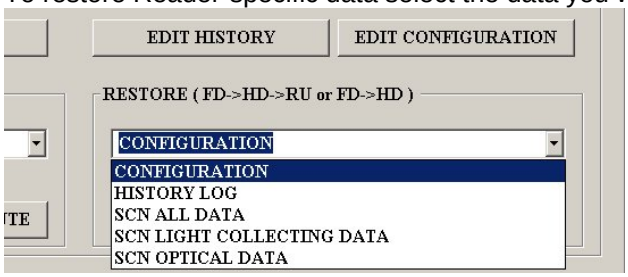


Recommend data: CONFIGURATION, SCN ALL DATA, HISTORY LOG

2. Click [**EXECUTE**] and follow the instruction given.

7.3.2 Restore

1. To restore Reader-specific data select the data you want to restore from the list:



2. Click [**EXECUTE**] and follow the instruction given.

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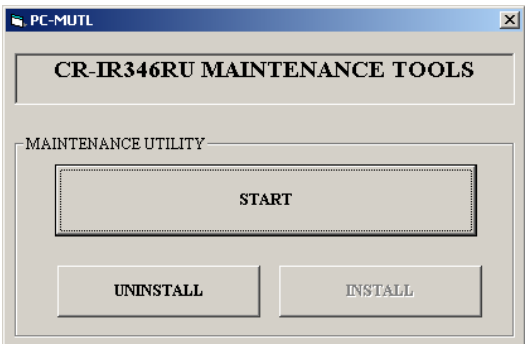
8 Uninstall Software

Two software packages are stored at the PC, the PC Maintenance Utility and the application software of the Reader unit.

Uninstall the PC Maintenance Utility:

1. Insert the CD-ROM containing the application software of the Reader.
   The CR-IR346 Maintenance Tool starts automatically (PCR Eleva: via FSF).



2. Click [Uninstall] and follow the instructions of the uninstall wizzard.

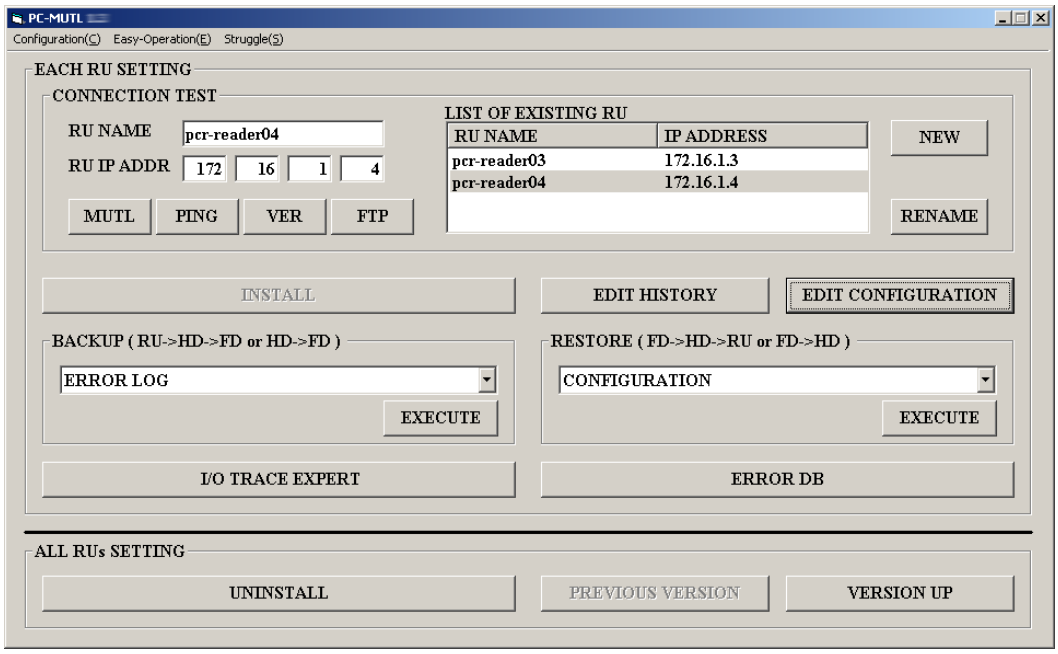
Uninstall the application software:

1. Insert the CD-ROM containing the application software of the Reader and wait for the CR-IR346 Maintenance Tool (PCR Eleva: via FSF).

2. Click [Start] to open the PC Maintenance utility.

3. Click [Uninstall].

   The application software and the configuration of **all** Readers will be removed.



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9 Servicing the Reader

Prerequisites: Null Modem cable (delivered with the system) when using the serial interface

All service functions of the Reader are managed by the program **PC Maintenance Utility** running on the PC.
A subpart is the program **MUTL** which is stored on the CPU board of the Reader.
MUTL can be reached either via network or the serial interface.
If selected via the Maintenance Utility a login with ***cr-ir346*** as login name and password is required.

9.1 Starting the PC Maintenance Utility

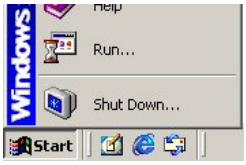
1. Exit the application running on the PC by pressing the <Shift> button and clicking on the Philips and/or Exit field. The Windows desktop appears. (PCR Eleva: Use FSF according to chapter 3).

2. Log off as user and log on as administrator if an user has been created (e.g. for Preview Unit).

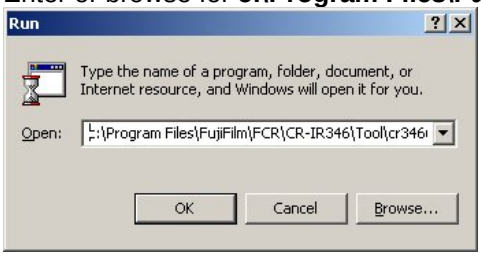
3. Start the PC Maintenance Utility program by doing the following:

   Click

   Click **Run...**

   Enter or browse for **c:\Program Files\FujiFilm\FCR\Tool\cr346uty.exe** and click [**OK**].

4. Select the Reader unit in the **LIST OF EXISTING RU**. Now all service functions are selectable.

Recommendation: Create a shortcut to the desktop of the PC.

Note: Do not use the PC Maintenance Utility and the application at the same time.
Then the Maintenance Utility will not work correctly.
One exception is the shading and sensitivity adjustment procedure of the scanner unit.

9.2 MUTL via the Network

1. Start the PC Maintenance Utility at the PC.

2. Select the Reader unit and MUTL.

3. Login with ***cr-ir346*** as login name and password. The prompt '**->**' appears.

4. Enter ***mutl*** and press <Enter>, the service menu of the Reader is displayed.

For further explanations please refer to the Service Manual of the Reader.

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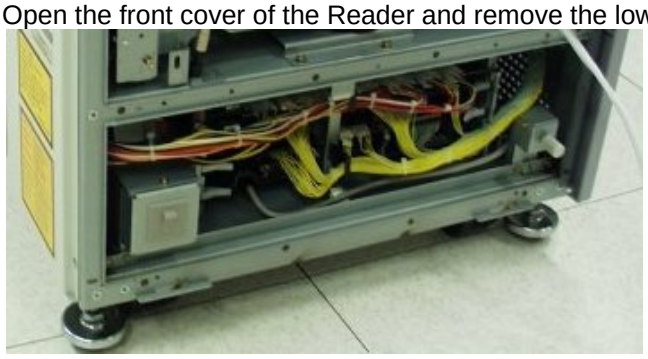
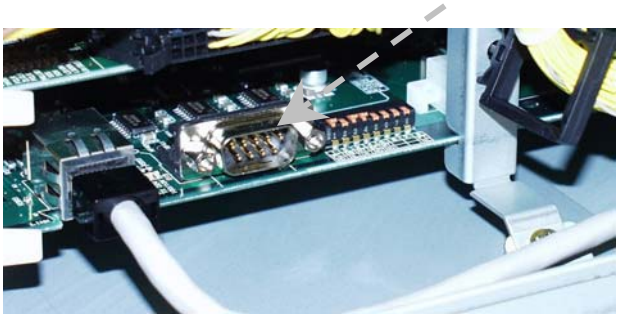
9.3 MUTL via the Serial Port

1. Open the front cover of the Reader and remove the lower light protection cover.



2. Connect Null Modem cable to the serial port on the CPU board of the Reader.



3. Connect Null Modem cable to a serial port of the PC.
4. On the PC start up a terminal program (e.g. Start > Accessories > Hyperterminal > Hyperterminal).
5. Select the used COM port and set the protocol parameter to 9600,8,N,1.
6. Press <Enter>.
   The prompt **'->'** of the Operating System should now be displayed.
7. Enter ***mutl*** and press <**Enter**>, the service menu of the Reader is displayed.

To see also the Reader's start-up messages, reboot the Reader.

For further explanations please refer to the Service Manual of the Reader.

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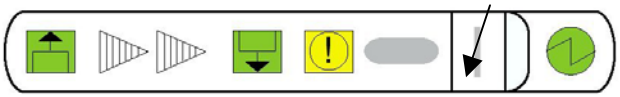
9.4 Resetting the Reader to factory defaults

To clear the Reader's Backup memory (FLASHROM) and to set the Reader IP address to "172.16.1.10", perform the following steps:

1. While holding down the Reader's <**Erasure Process**> switch turn ON the power switch.



2. Verify that the primary erasure indicator LED on the Reader panel comes on. (At this stage, you still have to hold down the <Erasure Process> switch.) If the LED remains extinguished, repeat step 1.

3. Release the <**Erasure Process**> switch.
   The Reader is now set to defaults.

Alternatively:
The same result will be achieved by using the function **Easy Operation(E)/Clear Backup Data** of the PC Maintenance Utility:

9.5 CPU board defective?

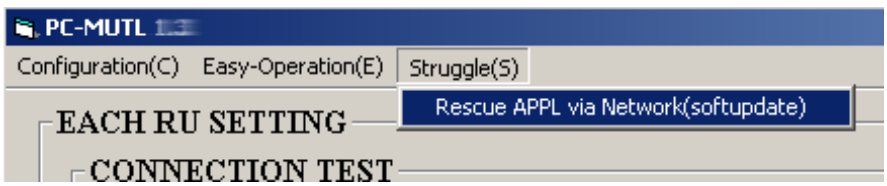
It could happen that the CPU board is not able to execute the MUTL program anymore.
In cases where the prompt '->' still appears it is possible to reset the CPU board by reloading the application SW. Only under this condition the following procedure can be used.
Please use this procedure carefully otherwise the CPU board can be damaged.
For further information please refer to the service manual of the Reader, chapter **Rescue APPL via Network (Soft Update)** or **Action to be Taken When the RU Application Software is Damaged.**

1. Establish either a network or serial connection to the Reader.
   The prompt ***'->'*** appears.

2. Enter ***softupdate*** and press **<Enter>.**

3. After the message ***Write OK*** appeared (approx. 2 min.) reboot the Reader.

Alternatively:
If the network connection still works the same result can be achieved by using the menu **Struggle(S)/ Rescue APPL via Network(softupdate)** of the PC Maintenance Utility:



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10 SENSITIVITY and SHADING CORRECTION

Precondition:

- The scanning unit of the Reader has been cleaned before.
- The scanner data have been copied to a floppy diskette by using the service program PC-MUTL.

10.1 Check sensitivity setting

1. Uniformly expose a 35x35 cm or 35x43 cm (14x14", 14x17") IP with a dosage of about 1mR (8.7 μGy) at about 80kV. Use a large SID (min.1.8m). Don't use any filters. Open the shutters of the collimator completely. Green label of the cassette shows to the anode of the tube.
   Check the dosage with a dosimeter.

2. Wait 10 minutes before entering the cassette into the Reader. Select examination: **SERVICE/ TEST** and the view **SENSITIVITY.** Be sure that this view is programmed to EDR = 1 (semi mode) and MRM code 0900.

3. Compano system:
   For the result look at the image console, e.g. EasyVision RAD.
   S value: 170 ... 250
   Pixel value: 450 … 511 ... 570 valid for EasyVision RAD (10 bit, 0 = black)
   1850 ... 2050 ... 2250 valid for PCR Eleva and 1 mR/ 8.7 μGy (12 bit, 0= white)
   2150 ... 2350 ... 2550 valid for PCR Eleva and 2 mR/ 17.4 μGy

   Compano S systems:
   For the result look at the film:
   S value: 170 … 250
   Density: 1.0...1.3...1.6

   If not perform the automatic sensitivity and shading correction.

Note:
It is possible to use the double dose (2 mR/ 17.4 μGy). Then the S value should be in the range 85 … 115.

10.2 Adjust sensitivity and shading correction

1. Start the normal application mode and an examination under SERVICE/ TEST, so that the green ready lamp of the Reader goes on.

2. Uniformly expose a 35x43 cm (14”x17”) IP with a dosage of about 1mR (8.7 μGy) at about 80kV.
   Use a large SID (min.1.8m). Don't use any filters. Open the shutters of the collimator completely.
   Green label of the cassette shows to the anode of the tube.
   Check the dosage with a dosimeter and write down the measured value and the time (now you have 10 minutes for the next steps).

3. Start the PC-MUTL at the FTP Server parallel to the normal application:

   At Preview Unit:
   - Press <Ctrl> + <Esc> to get the task bar of WINDOWS.
   - Click on Start/ Run and browse for **c:\Program Files\FujiFilm\FCR\TOOLS\cr346uty.exe**
     The service program PC-MUTL will be started.

   At PCR Eleva Workspot:
   - Start PC-MUTL via FSF.

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4. Select the Reader unit and click on MUTL.

5. Login with cr-ir346 and the password cr-ir346.

6. Enter at the prompt → mutl and press <Enter> to start the MUTL program at the Reader.

7. Select **SCANNER UTILITY.**

8. Select **DATA MANAGEMENT, DISPLAY SCN DATA ETC** and **DISPLAY CURRENT DATA** and write down the following values:
   HVCENT: .....e.g. 474
   HVDATA: .....e.g. 474

9. Select **SHADING/ SENSITIVITY, SHADING/POLYGON** and **ON.**

10. Select **CALCULATION** and **SHADING,POLYGON AND SENSITIVITY.**

11. Enter the measured dose in [mR], e.g. 1.05, and press <Enter>.

12. After 10 .. 11 minutes the IP has been exposed put the cassette into the Reader.

13. When the IP has been read out ("Result: OK" appears), check again **DISPLAY CURRENT DATA**:

    HVCENT: .....e.g. 512
    QVDATA: .....e.g. 474 or ********
    The upper value should differ a little bit from the previous one.

    If you see extreme differences then reboot the Reader and repeat all steps.

14. Select **DATA MANAGEMENT** and **SAVE SCN DATA FROM RAM TO FLASH& SERV** to make changes permanent effective.
    Alternatively the backup function of PC-MUTL can be used to store the new data also on a floppy disk.

15. Leave and close the service programs.

16. Perform again the instructions given in **Check sensitivity setting.**

17. Make a backup of all scanner data onto a floppy diskette.

Note:
The sensitivity adjustment can be executed by using a dose in a range of 0.5 to 10 mR.
Recommended is a value in a range of 1 to 2 mR.

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10.3 Sensitivity Adjustment – Tolerances

Dose: 1 mR ± 10% Measured in 1% resolution, at 80 kV and in 1.8m distance, without any filter.The deviation from 1mR has to be entered in 1% accuracy as the correction factor into the Reader.

S value: 180...200...220 10%

Pixel value at EasyVision RAD (10 bit resolution, 0 = black):

486...511...536 5% deviation of the average value in main scan direction of the Reader, that means from the left to the right of a large size IP.

460...511...562 10% deviation of the average value in subscan direction of the Reader, that means from top to bottom of a large size IP.
The larger tolerance is caused by the tube (anode angle).

Pixel value at Workspot PCR Eleva (12 bit resolution, 0 = white):

1950 ... 2050 ... 2150 5% deviation in main scan direction
1850 ... 2050 ... 2250 10% in subscan direction
The larger tolerance is caused by the tube (anode angle).

Density: 1.2...1.5...1.8 No processing and curve 'a' of the lookup- table at EasyVision.
1.0...1.3...1.6 UM processing and curve 'A' of the lookup-table at EasyVision.
1.0...1.3...1.6 Standard processing at Compano S and Eleva workspot.

If the exposures have been read out with L= 4 instead of L=1, the tolerances of both the pixel values and the density on film will decrease accordingly.

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11 Remote Service

Telnet session:

- Start a Telnet connection on the remote PC to the IP address of the Reader.
  The Reader replies with: ***RU[reader name] login:***
- Enter the login name : ***cr-ir346***
- Enter the password : ***cr-ir346***

  The operating system of the Reader prompts with: ***->***
- To start the maintenance utility enter: ***mutl***

MAINTENANCE UTILITY FOR CR-IR346.

Escape INPUT/AUTO mode: [CTRL+C] [ENTER]

0. QUIT
1. LOG
2. VERSION
3. TEST
4. ELECTRICAL UTILITY
5. SCANNER UTILITY
6. MECHANICAL UTILITY
7. SOFTWARE UTILITY
8. BACKUP MEMORY
9. HV OFF

FTP session:

- Start the FTP program on the remote PC with the following configuration:
  IP address of the Host PC !
  User name (default): ***cr-ir346***
  Password (default): ***cr-ir346***
  Type: ***Binary***
  Target directory: ***system/<reader name>***
- Copy the configuration files to or from your remotely connected PC.
  Path: /***system/<reader name>/config***/
  irset.cfg = system configuration
  irstatus.cfg = internal configuration, do not change!
  netmasks = netmasks
  route = routing
- Copy the error logging and trace data files saved before on the Host PC via the Telnet session, to the remotely connected PC.
  path /***system/<reader name>/log/***:
  errorx.log = errors, system does not work
  error0.log = messages and warnings
  and all other files of this directory for third level service
- Close the FTP program on the remote PC.

Do not change anything in files which either contain the note "Do not edit this file" or which have the file name extension ORG!

These kind of files are default files and can be copied if something went wrong during a configuration.

Alternatively:

Much more user friendly special remote software, e.g. Remote Administrator, can be used.

See also the Release Bulletins of the Console (Compano S, Preview Unit, Eleva Workspot).

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